day; and it was of a greenish yellow colour, and soiled her linen. A question the judge asked me was, Would the discharge make its appearance so soon, if the child had been assaulted, as was supposed, the first night that she went into the country? I said that I did not consider this a case of gonorrhoea, but a blenorrhoeal discharge, the result of rough usage. Casper considers this one of the most important signs, since it is always found in children from twelve to fourteen years of age.

3. *The Absence of Blood.* In reference to this point, Casper says that in young children it is always absent, but is always present with adults.

4. *Pain in Walking.* This symptom was well marked in this case; and, according to Casper, in children this symptom is never simulated.

5. *Pain in Passing Urine.* This was also well marked in this case. The pain came on the second day, owing to the inflamed state her private parts were in.

6. *The Venereal Symptoms.* In this case, when the girl first presented herself for examination to Dr. Hooper, they were well marked, she having chancres in the labia. Mr. Brookes, of the Westminster Road, proved that the man was about the same time labouring under the venereal disease, not gonorrhoea. When I first saw the child, I did not detect any chancres, only the discharge and enlarged gland in the groin.

7. *How was the Offence committed?* The girl was either drunk, or else completely worn out by fatigue. By her own account, she does not even remember being undressed. Beck, in his work on *Medical Jurisprudence*, says, in reference to this point: "If the sleep has been caused by powerful narcotics, by intoxication, or if syncope or excessive fatigue be present, it is quite possible for a female to be violated during her sleep without her knowledge." In this case, on the trial, it was proved that some one saw her uncle lying quite close to the girl, and asked him what he was doing that for; and, as there were no signs of violence, and the examination also proved that he did not succeed to penetrate very far, all this clearly points out to my mind that the offence was committed on the girl when she was under the effects of drink and fatigue, and that this was the reason of her not knowing anything about it.

8. *The Motive for the Assault.* In the West of England, it is considered that, if a man labouring under syphilis can have connexion with a child, he himself will be cured of the disease. I believe that this was the motive in this case; for he knew that he was labouring under syphilis at the time when he took the child into the country.

9. Another very interesting point in this case is, that the girl is now quite well, and free from all appearance of the disease, *without the aid of mercury*. Both Dr. Hooper and Mr. Brookes, when at Taunton, thought the child was so ill that she would never recover, but die. I am glad to state that she is now in better health than she has been for years, and looks as if she had never been ill at all.

NEW MAGISTRATE. Dr. Cocker, of Blackpool, has been placed in the Commission of the Peace for Lancashire. "Dr. Cocker has the distinguished honour of being chosen the first resident magistrate of Blackpool, and we hope he may enjoy a long career of public usefulness in the administration of justice. The appointment of a resident magistrate will be a great convenience, and the influential position Dr. Cocker holds in the town, naturally points to him as the gentleman upon whom should fall this distinctive mark of confidence and favour."

Original Communications.

ON A CASE OF LOSS OF POWER OF EXPRESSION;

INABILITY TO TALK, TO WRITE, AND TO READ CORRECTLY AFTER CONVULSIVE ATTACKS.

By J. HUGHLINGS JACKSON, M.D., Assistant-Physician to the National Hospital for Epilepsy and Paralysis; and to the London Hospital.

[Continued from page 94.]

THE reader will observe how much worse the spelling is in the preceding specimen than in what the patient copied from the test-types. Whilst he was copying, I noticed that he kept referring to the original for nearly every letter. He transferred each particle quickly, so that it lost nothing in carriage. He did not trust it to his memory for a moment. To use a simile, it passed from his eye to his fingers without any adulteration from his own damaged organisation. The patient brought me the following since the previous part of this paper appeared. I give it in his spelling.

"The great fault in me smpt (crossed out) seems to be that I cannot speel when writing, if fact (crossed out in pencil) at some times I cannot at first recollect how to put down the Letter L. I have often been bothered as to how make the note* (letter) until I but it down in my memory by spelling my own name. (His name begins with the letter L.) Sometimes I am bothered to recollect various letters, and then I run the A B C in my head until I cum (crossed out in pencil) come up to the note (letter?) I want, and then I can bring it out to my"—

My patient tells me that he frequently cannot write a letter until "I have got it before my eye." When he said this, he put his hand before him. He could make the motions for using a pen; but he had lost the power of reproducing completely the impulses for the particular actions he had learned for the writing of particular words, and had, as it were, to submit to a new, although a transitory, education when copying.†

In further illustration of such difficulties, I will give an extract from my notes of the case of a patient called Sadler, lately under the care of Dr. Fraser in the London Hospital.

"May 18th. I found that he had tried to write something for me. The paper was written over in many places, and words were often crossed out. His name was the only word written in writing letters, and his Christian name "Thomas" was correctly spelled, but his second name "Sadler" wanted the letter 'r'. It was written nine times, and in each the letter 'r' was absent. The words 'London Hospital' he had printed, and he had doubtless copied them from his bed-ticket."

"May 29th. He showed me with some triumph three or four lines of writing. I saw at once that

* The word note was crossed out, and the word letter substituted; but I observed that throughout our conversation on the statement he had written out, he used the word note for letter. Neither his father nor myself could get him out of this use of the word. He stared at our objections vacantly.

† Professor Bain says (*Fortnightly Review*, February 1st, 1866):—"It must be considered as almost beyond a doubt, that the renewed feeling occupies the very same parts, and in the same manner as the original feeling, and in no other parts, nor in any other manner that can be assigned." Again, he says:—"For every act of memory, every exercise of bodily aptitude, every habit, recollection, train of ideas, there is a specific grouping or co-ordination, of sensations and movements, by virtue of specific growths in the cell-junctions."

they were copied. They were taken from a hymn-book; and every particle of the text was imitated in the most slavish manner. When he wrote his name, he used the letters of writing; but in copying the lines of the hymn, he made the letters exactly as they were printed in the book. Where there were capitals he made capitals. The letters 'l', 'r', and 'a', cut a very singular figure in his copy."

These facts are of great importance. Patients who cannot write anything—i.e., who cannot write from themselves—can frequently copy from books with comparative ease. If we tell an out-patient who has defect of speech to bring a specimen of his writing, the next time he comes he is pretty sure to bring something copied from a book or from a newspaper, and the spelling is generally quite correct; the penmanship is often wonderfully good, even when the writing is, as it often is in these cases, obliged to be done by the left hand. It is quite different when the patient tries to write anything, to use a common expression, "out of his own head."

The patient whose case I am now relating read Latin words with scarcely a mistake. He knew no Latin, and was therefore obliged to look at each syllable carefully. He seemed to have lost power in doing things by habit, except when the habit was very strong, as in writing his own name. [March 1866. He now makes mistakes in reading Latin.]

This part of the subject has many difficulties; and we may easily get wrong in our conclusions as to the degree of a patient's power of writing. If we ask a hemiplegic patient with considerable defect of speech to sit down and write something—sending him into a separate room with his friends in order that he may not be nervous—the result very often is that he writes nothing but his name. In recording such a fact in our case-books—i.e., that the patient "can write"—we should be careful to mention what he had written. If we tell the patient to write something more, in nearly all the cases I have seen, in which speech has been very much affected, he either cannot or will not. I then ask him to bring a letter the next visit; but very often, by neither entreaties nor bribes, can I obtain anything. The patients will say they "can't think." When they do bring a letter, it is of one, two, or three lines only; and then very likely their friends have helped them with suggestions. I have by me several letters written by patients who have defect of speech, in which there are no mistakes. These letters might be taken as evidence that the patient's power to write was not impaired by the damage to their brains which had impaired their speech. But, in preserving such letters as specimens, we ought to record on them a statement as to whether or not the patients had a difficulty in writing them. I can easily understand that, whilst some would consider them as "evidence that the patient could write", others would point to the difficulty with which they were written as evidence that "power to write was impaired." One patient, a woman, whose defect of speech was little more than Ataxy of Articulation, brought me a note of three lines correctly written; but her husband told me that she had got the words from books, and he confessed that, after all, he had given her some help, although I had particularly requested him not to help her. Besides, it had taken her a week to write the letter; and she had written it on her slate several times before she copied it on paper. This woman brought me at first a long piece correctly copied from a book. She did not always spell her own name quite correctly. She spelled Caroline "Caroliney." I took care to ascertain that she had been able to write letters before her illness. Her

husband procured for me several letters she had written to her sister before her seizure.

Another instance, a man, 35 years of age, who looked intelligent, had, when I saw him, but slight defect of speech, with paralysis of the right side. I will here mention what took place, although I am not without misgivings that these lengthened accounts may be tedious. I hope the reader will grant that it would be far easier to make general statements than to sit for an hour with a patient in order to be able to record what he really could do. It requires much patience and a great deal of time to get precise information on the defects in many cases of this kind. And, in working very carefully, we frequently seem to get further off final conclusions. One object in writing this paper is to try to show how different cases are, and that we cannot yet make general statements on the defects of mind and motion which occur with hemiplegia. I have not the smallest wish to found any doctrines; but I am very anxious to contribute a little to the methodical investigation of a large and important subject, and such a note as the one I give is the only way I can think of, of giving a faithful illustration of the things which happen in some cases of this class. Indeed, I wish to state most earnestly that I am not writing with the intention of "proving" anything. And any suggestions in this paper are of little value if they do not lead to further investigations.

I asked the patient to write his name and address. He did so pretty well, although slowly, and he wrote only part of his address, No. 5, St. Edmu[nd's] Terrace.] When he had done this, he said he could not go on; and when urged he again said he could not, and added that "his brain would not let him." His sister then urged him, and he said peevishly "I can't, Ann." The next time he came, he wrote his address readily. I asked him to bring a specimen of his writing when he came again. He brought a paragraph copied from a newspaper in the characters of ordinary writing. I told him this would not do, and that he must write me a short note about anything he liked; but I mentioned the weather and his own health as topics. I sent him into a room by himself, but he wrote only his name. I then gave him some money, telling him jokingly that it was in payment for a letter. The next time the poor fellow came he offered me the florin again, simply saying, in his usual curt style, "I can't." I returned it; and, perhaps as a point of honour, at the following visit he brought me a short note. "1st December, 1864. Sir,—I went out to dinner on Sunday at my father-law going there w met a friend tried a took [took crossed out] a to speak to him could him [him crossed out] not." The next word I cannot even guess at. This, I was told, took him half an hour to write. However, next time, on January 6th, he brought a much better letter, and on June 1st a short note, which was very well written, and the words of which he could spell when I asked him. The letters were written on a slate first, and he had no help from books. In this case, the apparent defect of talking had been ataxy of articulation. He never made mistakes in names of things, according to his sister's report. Some of the words he said were clear. He jerked out his sentences slowly—i.e., the jerk came after a pause. The sentences were curt, and in a healthy person would have been thought rude.

As a rule, when speech is quite lost, power to write is quite lost too; and when it is impaired there is usually difficulty in writing. I speak of chronic cases. I do not, however, assert that there is any exact relation; and I wish particularly to repeat that in a few cases of considerable impairment of

speech, power to write is not impaired—at least, I think not. In one case of temporary loss of speech, with numbness on the right side, I found that the patient could write well, in every sense of the word write.

Dr. Sieveking, my colleague at the Hospital for Epilepsy and Paralysis, has given me brief particulars of a very interesting case which occurred in his private practice in January 1865. This patient had *no paralysis of the limbs*; but his mouth was drawn to the left side. "He could not articulate, but uttered uncouth sounds." He wrote replies, but spelled badly. This patient quite recovered.

I dwell on these points, as they are of importance in shewing how deep the defect of expression is when speech is even a little impaired from disease of the hemisphere. It will be found that, in cases of loss of speech from paralysis of the tongue, there is no difficulty in expression by writing. I have a patient now under my care at the Hospital for Epilepsy and Paralysis, whose power to talk is so much impaired from paralysis of the palate and tongue, that I cannot guess anything she tries to say. She carries a slate, writes quickly and correctly, and thus we can communicate accurately, if not conveniently. The loss of power to talk, or to talk well, which occurs with disease of the left* hemisphere, is a very different thing.

Now there is a certain kind of difficulty in articulation, which I have already mentioned under the name of Ataxy of Articulation, which occurs with disease of the hemisphere; but there is nearly always evidence—at least, I hold that there is—that other modes of expression (by other acquired movements) are impaired too. It is a great mistake to confound this sort of difficulty of articulation with the difficulty which occurs in partial paralysis of the tongue, palate, etc., and which paralysis evidently depends on disease in the medulla oblongata, or on disease of both sides of the brain, as very likely happens in general paralysis. Above all, it must be kept in mind that in Ataxy of Articulation the patient's articulatory muscles seem to have good power, even when articulation is very bad, even when it is much worse than in patients who have paralysis of one side of the face, half the tongue, and one vocal cord, all on the same side.

With the exception of deaf-mutism, I can call to mind few cases of permanent loss, or even of great permanent defect, of articulate language without other troubles. (I use the word permanent chiefly to exclude cases of Epileptic Loss of Speech). Indeed, deaf-mutism stands in great contrast to mutism from disease of the hemisphere. I have, however, recorded one case from the practice of Dr. Wilks, in which, with nearly total loss of speech, there remained power to write. But I cannot be sure that this patient's power of expression by writing was really good, as I unfortunately only asked her to

write her name. However, she did that well. About a year ago, I saw a well-educated gentleman who had hemiplegia of the right side and loss of speech; he wrote his name readily with his left hand when asked to write something, but he either could not or would not write anything more; he became angry when pressed. I should not now be sure that either of these patients could write well; although when I made a note of the case of Dr. Wilks's patient in a paper I have published on Loss of Speech, I considered it to be a case of aphemia—i.e., a case of loss of articulate language only.

Last month, Dr. Martin pointed out to me the case of a man who had had total loss of speech with hemiplegia of the right side, beginning May 27th. This is a remarkable case, and is decidedly exceptional. This patient wrote a letter, with which no fault could be found, on June 25th, although, even on July 3rd, when I saw him, he had considerable difficulty of articulation (Ataxy of Articulation); a difficulty of a kind which, as I have said, depends on disease of, or near to, the corpus striatum.

I afterwards saw another of Dr. Martin's patients, who had had loss of speech five months before, but who had recovered so as to be able to say a few words. This patient wrote the names of several things I shewed him—e.g., "umbrella", "ink", etc. I begged Mr. Square, Dr. Martin's clinical clerk (to whose courtesy I am much indebted) to get the patient to write a note. The patient wrote a few words, in which I could make out clearly, "Dear Sir,—I happy you and so become. I remains yours." Other words mixed with these I could not make out.

It is, then, very important to try a patient's power to write in various ways. It is not enough to get him to copy, nor to write his name, nor to write single words even when he finds the words. We must try all these, and besides ask him to write a note "out of his own head."

To return to the case the text of this paper. It is chiefly of interest as shewing the great diversity of defects of expression one may meet with in a single case of brain-disease. The unity of this diversity is, that the defects are disorders of acquired movements, or co-ordinated movements, as some call them. There is no evidence to demonstrate that the left hemisphere only is affected; but the defects this patient had are of the same kind as those we meet with in cases of hemiplegia of the right, and very rarely with hemiplegia of the left side. To use terms, the case illustrates, at least, the clinical relationship of epilepsy and chorea, and of mental and motor symptoms.

I will now approach the subject from another point of view.

A Digression on Epilepsy, etc. In the above I have, speaking of epileptic loss of speech, used the word epilepsy in its common meaning; but I think, as I have elsewhere suggested, that the term should be degraded to stand for our knowledge, or rather for our ignorance, of the various permanent and temporary conditions of nerve-tissue in functional divisions, or perhaps in nutritive regions, which conditions cause or permit temporary failures or losses of function. Thus, epilepsy would not, in this sense, necessarily convey the idea of convulsion, but of temporary disorders of function of many kinds, sensory as well as motor, and mental as well as physical. For instance, epileptic loss of speech might mean failure of any part of the "circle" by which mind lives outside in words. But, to give a more simple instance, and in more general terms, and with but indirect reference to speech, I would study convulsions according to—(1) tissues

* Nevertheless I have, since these remarks were written, seen in consultation with my colleague Dr. Morell Mackenzie, a woman who had partial paralysis of the tongue, with much wasting, who, in two letters, made odd mistakes in writing—e.g., hospitable for hospital. She spoke correctly, so far as expressing herself went, and her talk was thick, and not like the gabble which occurs with disease of the hemisphere near the left corpus striatum. Moreover, in loss of speech from disease of the hemisphere, there is no wasting of the tongue. Again, Dr. Mackenzie's patient had no limb paralysis. Although it may appear that I am arguing in a circle, I cannot but think this patient had, besides disease of the lingual nerves or nuclei, some more general impairment of her nervous system. This is the only case of the kind I have seen.

+ To the student I wish to speak earnestly on the many fallacies there are in observations on cases of defect of speech, especially when the defect is slight. Unless he know well the tricks and habits of disease, by seeing many cases of all sorts, he will be unprepared for the investigation of the large subjects of language and mind. He will be tripped up by little things.

affected, or the nature of local damage which affects these tissues; (2) organs injured; (3) functions disordered. The first (1) might be many things betwixt, let us say, health and cerebral hæmorrhage. And the standard of value in each (in one convulsion in fatal cerebral hæmorrhage, as well as in the most common chronic seizures) would not be any supposed types, such as idiopathic epilepsy. The grouping of one's thoughts would be about Health of (1) tissues, of (2) organs, and of (3) functions; so far as we know, or can get to know, about their healthy states. I have spoken of convulsions in preference to temporary failures of speech, but the principle is the same in each instance. For our point of departure in cases of defect of speech should be from what we know of healthy mind, language, and movement—an imperfect knowledge, it is true, but one with most of the elements of progress in it. In this way of looking at them, temporary defects of speech are very important, although, unfortunately, they are very difficult to study.

I hope shortly, as a plan of work, to attempt the comparison and contrast of (1) unilateral irregular movements, (2) unilateral attacks of spasm, and (3) unilateral paralysis. I would work at these, as if we had forgotten the terms chorea, epilepsy, and hemiplegia, according to (1) the tissues affected, (2) the organs damaged, (3) the functions disordered. I limit my illustration to one physiological region for convenience. I would in this region study all disorders in the movements and actions of muscles, from those of health to total paralysis, not omitting any cramps, jerks, or spasms, however partial these might be in range or in degree. Many reasons could be given for a comparison and contrast of certain cases of chorea, epilepsy, and paralysis. One reason is, that these diseases have in their very clinical history affinities which cannot be disregarded. I have now under my care in the London Hospital a girl who has had chorea of the left side, one convulsion, and left hemiplegia. I could relate many cases shewing similar relations. I have under my care at the Hospital for Epilepsy and Paralysis another patient, a girl, who has permanent hemiplegia, continuous irregular movements of the paralysed muscles, and occasional convulsive attacks. She has besides another disorder of motion, an ataxy of articulation, and her talk is of a sort which would be usually called stammering. Such anomalous cases have a place in our thoughts on classification of disease, similar to that which such animals as the ornithorhynchus have in zoological studies. The zoologist is more anxious to know what kind of a vertebrate this animal is, than to decide whether it is a mammal or a bird. So our anxiety should be, not altogether to see how far a case resembles most this or that disease, as described by distinguished men, but to learn when we can, in what way, and how far, the symptoms are a departure from health. But I urge this plan just now, in order that we may learn peculiarities and defects of motion with a view to the wider study of the movements of speech or the subjective movements of thought, and this too apart even from what we call the "complications" of the above named diseases with defective talking. We shall thus, I think, get some materials for better speculations about the education of centres and nerve-regions—a most important thing in our work on artificial acquirements, whether these be universal, as talking, or special, as playing the violin—such as (1) the odd contractions of the limbs in some infants, (2) the irregular movements in the chorea of children, and (3) agitations, etc., in persons beyond adult age. On this Positive—in contrast to which I would call the *Metaphysical*—Method

of studying certain Diseases of the Nervous System, I shall speak again later.

We should also at the same time, I believe, get materials for studying more exactly the Time of the organism itself. And these materials would, I hope, at length bear (although they would bear very remotely) on Mental Consciousness, in its relation to Time and Succession.* For it will be found that there are no abrupt boundaries betwixt physical and mental symptoms.

There are at least two chief views on the periodicity or intermission of convulsive paroxysms and other temporary disorders of function, to both of which views I would pay attention as equally as I could. One is, that the nutritive changes in the enfeebled region itself are the causes of the occasional attacks of spasms; the other that the injured part fails in some general change in the organism—a change possibly starting from the medulla oblongata or beginning in the vaso-motor system. Or, to use speculative language (which I could only partially agree with), in one the tension of (impaired) nerve-tissue is relaxed, not in the orderly actions of healthy purpose, but suddenly running down when the tension has attained a certain degree. In the other, the failure occurs because nerve-tissue cannot keep its tension in general disturbances of the system, whether these disturbances begin in a sort of (arterial?) wave in the organism itself, or are secondary to something outward, as fright. The enfeebled part is, as it were, "out of tune." Here it is interesting to consider the occasional influence of general emotional states on groups of partially paralysed muscles—causing them to become stiff, as in the "contracture" of infancy—to jerk, as in chorea—or to tremble, as sometimes happens in the paralysis of old people. The influence of certain respiratory acts, such as yawning, is well known. To use once more very speculative language, it would seem as if in such general states there was a discharge of tension, possibly, in the case of movements of the hand, of the nerve-fibres of some part of the hemisphere through the corpus striatum.

The convulsions of cerebral hæmorrhage ("ground-currents" from decomposition of nerve-tissue round the clot?), and possibly convulsions from plugging of vessels, seem to be instances of the first; and the fits which depend on the secondary changes of foreign bodies—e.g., tumours of the hemisphere—of the second.

Before leaving this subject, I may say that I adopt the views of my esteemed senior colleague, Dr. Radcliffe, so far as this, that I have no doubt that all clinical evidence goes to show that spasm is a sign of decreased and not of increased vigour of nerve-tissue. Indeed, without adopting these views, I do not see how we are to put in any reasonable order the phenomena of spasm, and paralysis, incoherence, and loss of speech, pain and loss of sensation, coloured vision and amaurosis, etc. In short, separating, by a scientific artifice,† the two really inseparable things, life and function, we may say that, within the limits of integrity of structure, function is highest where life—nutrition—is lowest. I think we may show that disorders of function occur in an order rather according to the warp of life (arterial regions) than

* These last few words are the title of a most important paper by Sir H. Holland.

† G. H. Lewes writes:—"In the study of animal organisms, the scientific artifice called Analysis, which separates ideally what Nature has indissolubly united, isolating each portion of a complete whole to study it undisturbed by the influences of other portions, has established a division of life into animal and vegetable. The division is as old as Aristotle, but has become the common property of science only since the days of Bichat. It is not exact, but it is convenient."

according to the woof of function. The value of this speculation, if it have any, is only as leading to investigation of disease, according to an anatomical method. I ask: Do the symptoms of temporary failures of function admit of being placed in an order according to what is known of the physiological relations of functional divisions and arterial (nutritive?) regions? It must be kept in mind, that most of our so-called knowledge of epilepsy is very speculative. And I think we should try to get rid of all those speculations which, although they give ease and comfort by "explaining things", have not in themselves the vitality to open out more work.

I have no doubt wandered far from the general subject of this paper; but a careful study of disease shows, that we must learn how the nervous system can suffer, if we wish to know what a particular set of symptoms means, rather than what it should be called.

[To be continued.]

CASES ILLUSTRATIVE OF THE USE OF BATHS IN THE TREATMENT OF DISEASE.

By GEORGE B. MEAD, M.D., Ph.D., M.A., L.R.C.P. Lond., etc., Newmarket.

CASE I. Rheumatic Fever. John B., Newmarket, aged 30, employed at the Gas Works, was attacked in November 1865 with rheumatic fever, and was bedridden several months. He gradually recovered; and in April attempted to return to his work, but after very few hours found himself quite unable, and had a severe relapse in consequence of his effort to do so. The pains were most severe all over his body and limbs, and his joints became so rigid he was scarcely able to walk. He was ordered to take the improved Turkish bath at 120°, with feet in hot mustard and water, followed by the warm douche and partial cold douche, twice a week, and tepid followed by cold sheet every morning at rising, and a mild dose of antacid saline three times a day.

After the first bath, all pain and much of the stiffness left him. While in it, he perspired most freely. The perspiration had a very peculiar sour smell and highly acid reaction. A bath was given every third or fourth day, gradually raising the heat to 160°, and the cold douche prolonged. After a few baths, he was able to walk with comfort six miles at a stretch. He has much improved in health and appetite; and is quite free from pain, and quite enjoys the bath.

The effect of the bath in improving the firmness of the muscles and healthiness of the skin was remarkable. His general health and appetite also very much improved.

The baths were continued with slight modifications for three weeks. At the end of that time, he was quite well, and returned to his employment, where he has continued ever since.

CASE II. Rheumatic Fever. C. F., aged 35, labourer, near Newmarket, had, ten years since, a severe attack of rheumatic fever. He was bedridden and helpless for months, suffering the most violent pain. It took him nearly a year to get over it.

The present attack came on in the beginning of May 1866. It began with rigors, great heat and thirst, restlessness, followed by severe pains attacking all the joints with such extreme tenderness that the slightest motion was attended by intolerable anguish. The joints were puffy; the tongue covered with white fur; pulse sharp and incompressible; urine scanty; bowels torpid; the skin was covered with unctuous perspiration of peculiar acid odour.

Examination of the heart shewed that it had been implicated in a previous attack, accounting for the occasional fits of numbness to which the patient was subject.

The portable hot air bath was ordered, with a magnesian saline aperient. The patient was kept in the bath twenty minutes, at the heat of 120°, and perspired very freely; the perspiration being most pungently acid. He was sponged over with warm water under sheets, and got quickly into a warm bed. He was ordered to be carefully sponged over with warm water night and morning, care being taken only to uncover part of the body at a time. He felt none the worse for the bath; and on the next visit his pulse was found to be softer, the kidneys and bowels acting freely; all the signs of acute inflammation had subsided, and he had slept well; he was perfectly free from pain, and had partly recovered the use of his limbs. After a week, a second bath was given; and his improvement was so rapid that in a few days he was able to get out of doors, and expressed himself highly delighted with the treatment and result. He has since continued to improve, and is now suffering from debility only.

REMARKS. In this case, the debilitated state of the patient, and the injury to the heart from the former attack, rendered imperative the greatest caution in the use of the bath; therefore, it was only used for a short time, and at long intervals. The result shews that, even where the heart has previously sustained injury, its use is perfectly safe—indeed, tends to ward off disposition to cardiac affection. The patient's blood was loaded with morbid poison, which Nature was seeking to eliminate by the skin and kidneys. By the assistance to the natural powers of these organs afforded by the bath, more poison was eliminated in a day than, without its help, could have been thrown off in a month; hence the disease was enabled to run its course quicker; and, instead of the sufferer being in agonising pain for weeks and slowly recovering, his sufferings were speedily terminated, and a cure effected in Nature's own way.*

A gentleman, now in the most robust health, some years back, when reduced to an almost hopeless condition, was cured by similar means in a very few weeks, after all other remedies had failed, and may be referred to, so satisfied is he of the value of the means which he justly says "saved his life."

CASE III. On Monday, May 16th, 1866, at 10 A.M., Dr. Mead was requested to visit a stable-lad in Newmarket, who had been for a day or two complaining of pain and difficulty in swallowing, for which a saline mixture with acid gargle had been used.

There were redness of the velum, uvula, and fauces; restlessness and anxiety; difficulty of deglutition, each attempt being attended with sharp cutting pain; the act of inspiration was protracted, whistling with throttling noise. The voice was a hoarse whisper; the countenance anxious, ghastly; the eyes protruded; there was a painful sense of suffocation. The cough was harsh, stridulous, and husky. There was great tenderness of the laryngeal cartilages; which were painful on pressure. Pulse 120, hard; skin hot and dry.

The patient was stripped, placed in a chair, and enveloped in blankets, with his feet in hot mustard and water, and hot fomentation-cloths around the throat, and, by means of the portable apparatus, subjected to a heat of 130° Fahrenheit. After about ten minutes, copious perspiration was caused, with feel-

* The apparatus used was invented by Dr. Mead; it is portable, and, by a very simple contrivance, allows a ready adjustment of the heat.